

Commentary

Moving Beyond Imagery

Jonathan Richmond

As motorists sit stuck in traffic, they dream of speeding into the horizon on bold new freeways or of being whisked to work in luxurious comfort on board futuristic-looking rail rapid transit. Experience elsewhere provides the imagery for what should exist here and now. Trips down uncongested rural interstates suggest an ideal for the city. Rides on the rapid transit systems of San Francisco, London or Paris provide the vision for cities not currently served by rail.

The Roadbuilder Myth

Our experience leads to the creation of myths of religious and potentially misleading persuasiveness. Perhaps the most prevalent myth is that congestion can be cured by building more roads. Driving the myth is the metaphor of a blood circulation system carrying a more-or-less stable volume of fluid. If a human artery becomes blocked, by-pass surgery might be prescribed. If successful, free-flow is restored. There is, similarly, the presumption that if more road space is created, traffic will once more breeze along at 55 mph. Unfortunately, however, a particularly iniquitous version of Parkinson's Law, "traffic expands to fill the space available," quickly comes into play and the road system returns to an equilibrium state of rush-hour congestion. Simple laws of supply and demand explain why: adding road space initially speeds up traffic, lowering the "cost" of using the system expressed in time. The lower cost leads to increased demand and also to a reorganization of demand: since it is now "cheaper" to travel during the peak, people who previously avoided these hours are no longer deterred. As the increased demand slows the system, it levels off at an equilibrium level of congestion.

The Railroader Myth

The circulation metaphor also contributes to the Railroader Myth: build new free-flowing (rail) pathways, and relief will be provided to the blocked (road) arteries. The myth's hold is strengthened by some intuitively-attractive attributes of railroad operation. Trains come in large units capable of providing the capacity of hundreds of automobiles. One railroad track therefore seems equivalent to several lanes of freeway. The right-of-way is, furthermore, seen to be controlled with space-age computerized precision, allowing trains to be shot along at high speed.

Several factors which appear to mitigate against the Roadbuilder Myth fortify the Railroader position. Electrically-powered rail rapid transit systems are seen to be energy-efficient and non-polluting. They also appear to provide a solution to the needs of those without access to cars. They even appear capable of catalyzing urban revitalization.

New rail transit systems are currently planned for several western cities of relatively low density. These cities have cultivated the car with particular ardor and the car's unique flexibility has allowed a dispersed urban form to develop. In these cities, rail advocates point at the worsening congestion often afflicting suburbs as much as business centers, and argue that an "alternative" is needed. But no matter how "futuristic" the trains they propose, nor how fast they might travel, the service cannot succeed if it is out of harmony with the economic and demographic landscape it is to serve. When travel patterns lack focus, linear-based rail transit fares badly: it is of little use to provide a high-speed

journey between two points if a roundabout trip is required to reach the departure station and a further transfer is needed to get to the final destination.

The train served the traditional core well; it continues to play a vital role in dense centrally-focused east coast cities. Rail transit cannot, however, succeed in attracting more than a tiny fraction of passenger trips in dispersed cities of the post-industrial West. Not only is it naive to expect that it can meaningfully reduce congestion, but because it can only handle a small part of the demand, it cannot make significant contributions to conserving fuel or improving the environment.

Advocates riposte that rail is required precisely because urban form has lost focus — rail can pave the way to reinvigorated central business districts and promote more orderly development, they say. But whatever rail's city-shaping influence in the past, its potential impact today must be seen in the context of the locational advantage presented by existing mature road systems. Not only would the rail systems fail to meet the majority of urban needs, their capacity compared to that of roads is tiny. Their potential impact on shaping economic development has therefore generally been vastly over-stated.

It is revealing to trace the symbolism omnipresent in the language of those who would claim otherwise. Political and business leaders see that cities with impressive subway systems often have thriving downtowns with active business districts, chic shopping areas, theatres and maybe even an opera house. As Los Angeles County Supervisor Kenneth Hahn said, "if you're going to have a great city, you have to have rail rapid transit." Decision-makers observe how smoothly transit-oriented cities seem to run, but don't test whether their visionary systems will work in the dispersed "autopias" of the American West. Nor, of course, do they reflect on the congestion which would be caused if they *did* stimulate growth in the urban core.

Finally, and perhaps most iniquitously, it is said that rapid transit will help the urban poor along with others lacking access to cars. The Los Angeles — Long Beach light rail service (which crosses Watts), for example, symbolizes relief from the isolation and despair from which the post-riot years have provided Watts no escape. The rail project will plug Watts into the rest of the region, open up new job opportunities and provide a means for children to get out: it would give them access to a better life and a brighter future I was told at a committee meeting of the community organization, Westminster Neighborhood Association.

But light rail has few benefits to offer depressed South-Central Los Angeles. The work trips of mid-corridor residents reflect the habits of the region as a whole: they are dispersed, with only nine percent working in downtown Los Angeles and one-half working outside the Long Beach corridor.

Twenty-six percent of workers from the mid-corridor live as well as work within that zone. But for only a minority of them would a rail station be close to both their homes and workplaces. For others a journey via connecting buses would be necessary, making for a more circuitous trip than is possible by direct bus service from each neighborhood. If the trolley is installed, local buses will be reconfigured to meet the needs of the trolley, rather than those of most passengers using public transportation.

What Should Be Done

While actions favored by politicians and the public are often associated with an aura of highly positive symbolic imagery, measures more likely to make a real contribution to the urban transportation problems of the 1980s generally have far less visceral appeal.

While people call for double-decking urban highways, less attention is focused on running existing roads more efficiently instead. Within cities there is great potential for taming the anarchy of street operation. The City of Los Angeles does now have plans to link 162 downtown intersections to a computer capable of monitoring changes in the ebbs and flows of different streets and adjusting the phase of signals to more efficiently accommodate traffic. One City official has said this promises to increase street capacity by ten percent. Control of on-street parking, one-way streets projects and reversible lanes also offers the prospect of smoother-flowing street systems. But to merchants, such proposals conjure up an image of less vehicles — and less business — going past their doors, and plans to implement these types of improvement have met opposition.

When too many vehicles occupy a freeway lane, speeds slow and throughput diminishes dramatically. While a lane can accommodate 1800 vehicles per hour at 55 mph, its capacity falls to 1200 per hour at 35 mph. Controlling access to freeways allows *more* people to use them and at higher speed. But the very word *freeway* makes it seem repugnant to restrict usage in any way. Ramp meters evoke images of resentful motorists being held up at freeway entrances. Although Caltrans now wishes to meter all freeway ramps in Los Angeles, such spectacles do not sell very well politically.

Lanes reserved for high-occupancy vehicles (HOVs) on both major highways and surface streets offer a further opportunity for better management of roads. While planners have tended to be concerned with moving as many *vehicles* as possible, HOV lanes stress increasing the flow of *people* in less vehicles. But they are employed in too few instances.

The notorious Santa Monica Freeway diamond lane experiment demonstrated the heavy opposition likely to result from taking away an existing lane from general use. But it also takes more political courage than can normally be mustered to devote a newly-created lane to buses and carpools. The action is perceived as analagous to a baron extending the area of common land but only allowing favored villagers to use the new pasture. The total capacity of pasture available to the village might now be increased—with everyone better off than before—but it would be surprising if the less-favored farmers did not bear resentment towards their privileged neighbors.

Pricing presents another area where significant improvements are possible. People see the perceived price of an automobile trip as the cost of gasoline, while they perceive the cost of a journey by transit as the full fare. Peak road users impose the greatest marginal costs—without rush hour loads much smaller facilities could cope with the traffic, and major urban highways might not be needed at all. Yet, the current taxing systems charge peak motorists no more than those who travel at less congested hours. Peak-hour tolls would make those responsible for the greatest costs pay for them. They would make non-peak usage relatively cheaper, attracting those who could avoid travel at the times of highest demand to less congested periods of the day. The result would be faster journeys for those who chose to pay the peak-hour usage charges. Public transport would also become relatively more competitive.

Most employers currently provide parking free of charge, even though the land devoted to parking space clearly has a market rent. Such a subsidy helps make it cheap to drive to work, and inequitably favors motorists over transit riders. If all employees were given a salary increase equal to the market value of a parking space, but were charged that amount if they wished to continue parking, aggregate welfare would be increased. Those who most valued driving to work would continue to park, and would be no financially worse off than before. Other former drivers, presented with the choice of using the cash for either parking or transit would now opt for transit.

Public transport also suffers from aberrations in pricing. The practice of charging flat fares for whatever distance is travelled is one major source of inequity. In Los Angeles, for example, crowded urban bus lines transporting the city's poorest residents short distances cover almost all of their costs, while upper-income commuters from the suburbs receive subsidies of several dollars per day. One alternative use of the money Los Angeles is intent on squandering on rail would be to charge the poor no greater share of the costs of service than the wealthier pay. Much more could also be done to upgrade bus service to a decent level, to serve the many neighborhoods and majority of public transportation users rail would never reach, to provide custom service to a wider variety of destinations with a flexibility not possible with rail and to use freeways more efficiently to speed both buses and carpools.

None of the above suggestions are in any way original: they have all been proposed many times, particularly by academic transportation planners. They have often been dismissed because the distorting imagery associated with them gives a poor impression. While practice (on Los Angeles' El Monte Busway, for example) has shown that high-quality express bus service can be made attractive even to high-income professional workers, the imagery of buses is extremely negative. While rail evokes images of colorful vehicles laden with white-collar workers converging on flourishing downtowns, the bus is synonymous with poverty and crime. It is hard to imagine that such an apparently low-class vehicle has real advantages to offer. It is equally difficult to see how travellers can be made better off by controlling their access to highways or imposing tolls or parking charges.

It is naive to preach these changes from an academic armchair without appreciating the difficulties of implementing them. It is no excuse, however, to shrug one's shoulders and call for costly and ineffective measures simply because their superficial symbolic attraction is stronger.

The challenge is to move beyond imagery. This requires planners to expose and critique the assumptions underlying panaceas of visceral appeal and to avoid releasing any recommendations of their own without putting them to a similar test. It also means that planners must devise ways of communicating findings understandable by the laity. Since experience plays such an important role in interpretation, one option is to highlight the facts of our case using examples our audience can appreciate based on their personal experience. But, since that experience is of obsolescent ways, this presents many pitfalls.

Experience, however, produces the only threads we have to weave. Our task is to enable both our clients and ourselves to reinterpret experience and, through the displacement of concepts, allow old metaphors to be surfaced, seen as faulty and discarded, and new ones to be developed capable of leading us towards more effective planning. □